



**National
Transportation
Safety Board**

National Association for Pupil Transportation

October 22, 2012

The Honorable
Christopher A. Hart
Vice Chairman

Outline

- NTSB 101
- Recommendations implemented
- Recommendations outstanding
- Recent investigations

What NTSB Does

- Independent federal agency, investigate transportation accidents and incidents, all modes
 - Aviation
 - Highway
 - Rail
 - Marine (NTSB or Coast Guard)
 - Pipeline
- Determine probable cause(s) and make recommendations to prevent recurrences

Independent

- Five Members (nominated by President, confirmed by Senate)
- Members are not investigators
- Safeguards for independence
 - Members have a fixed term (not discretionary appointees)
 - Terms staggered
 - Political party balance
 - Relevant expertise
- Conclusions from facts, not politics
- Not a regulator; hence, no “dog in the fight”

Purpose

- Single focus of investigations and recommendations is **SAFETY**
- Primary product: Safety recommendations
- Safety recommendations are issued to any organization that has authority to fix the problem, including operators, regulators, labor unions, and state and local governments
- Favorable response to recommendations: More than 80%

Office of Highway Safety

- 7 million highway accidents per year
 - More than 19,000 per day
- 32,788 deaths in 2010
 - Lowest level in recorded history
- We can only “launch” on 4-5 major accidents each year
- 2 teams of 6-8 investigators

Launch Selection Criteria

- High public interest?
- Have we done it before?
- Can we make a difference?
- Do we have the resources?

NTSB Crash Investigations



Flagstaff, AZ



Buffalo, MT



Monticello, MN



Conasauga, TN



Holmdel, NJ



8
Easton, MD



Holyoke, CO



Central Bridge, NY

Safety Improvements

- Develop and require occupant protection systems that account for frontal, side, and rear impact collisions, and rollovers
 - Many implemented, some not done
- Highway intersection safety
 - Nationwide database to track, monitor, and inspect about 3,500 highway-railroad crossings
- Emergency egress
 - New standards for the size of school bus side windows and roof hatches, and requirement that exit doors remain open during emergencies

Safety Improvements (Con't)

- School bus design and occupant protection
 - Greater body joint strength, roof rollover protection, redesigned energy-absorbing seats, and emergency exit and fuel system protection improvements
- Youth drivers
 - DOT no longer allows States to employ 16- and 17-year-old school bus drivers
- Upgraded school bus inspections/repairs

Recommendations Still Open

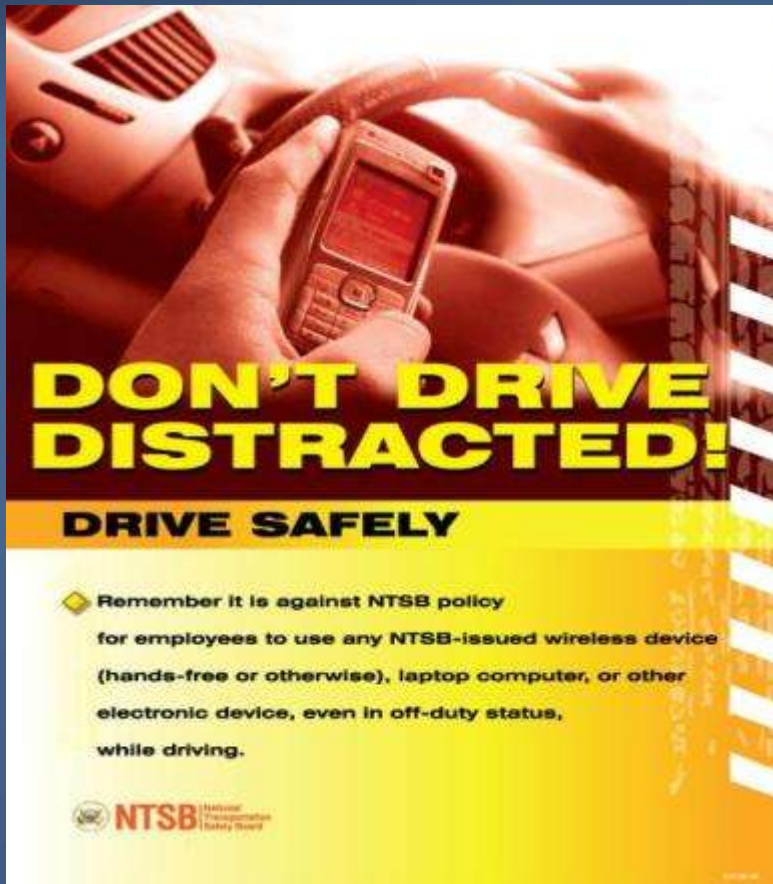
- NHTSA: Passenger protection standards for sidewalls, sidewall components, and seat frames
- States: Use school bus or equivalent when transporting >10 passengers to/from school
- NHTSA: Emergency exits are easily opened and remain open
- NHTSA/FMCSA: Event data recorders

Emerging Generic Problem

- Cell phone use
 - Problem in *EVERY* mode
 - Worst offender: texting
 - Even hands-free use can be safety hazard



Corporate Cell Phone Policy



It is against NTSB policy for an employee to use any NTSB-issued wireless device (hands-free or otherwise) while driving – even in off-duty status

What's your policy?

Recent Accident Investigations

– Gray Summit, MO



First Collision – Pickup Into Bobtail



Second Collision – SB1 Into Pickup



Third Collision – SB2 Into SB1



Fatalities and Injuries

– 2 Fatalities

- Driver of pickup truck
- Rear passenger - lead bus

– 38 Injured

- 35 Passengers
- 2 School bus drivers
- Driver of truck tractor

Safety Issues

- Driver distraction
- Collision warning systems
- Video event recorders
- Missouri oversight and inspection of motor carriers in pupil transportation
- Design of emergency exit windows
- Lack of pre-trip safety briefings

Pickup Truck

- Approached work zone at 69mph, passing school buses
- Moved from closed left lane to right lane
- Actively texting (11 messages in 11 minutes)
- Struck stopped bobtail
- CWS could have alerted driver



Lead Bus

- Lead bus driver
 - Focused on the motorcoach on shoulder
 - Long attention away from roadway
 - Can be addressed through training
 - CWS could have alerted driver



Following Bus

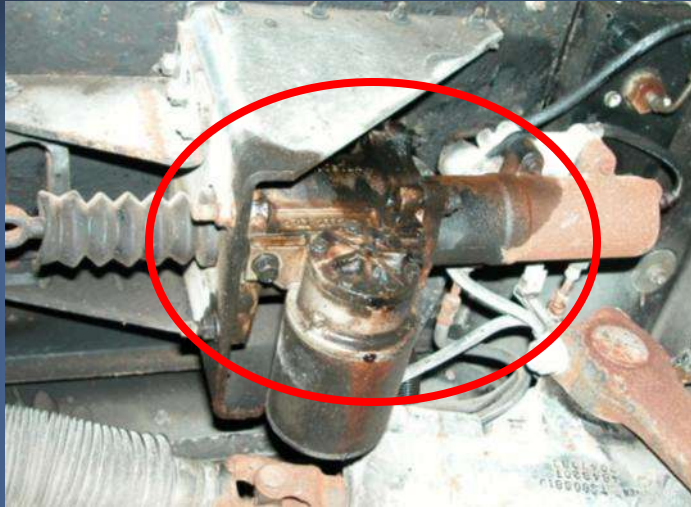
- Following bus driver
 - Less than recommended minimum separation
 - Can also be addressed through training
 - CWS could have alerted driver
 - Video could be useful as driver training tool



Maintenance/Inspection Issues

- Maintenance by the motor carrier
- State oversight of the motor carrier
- State school bus inspections

Lead Bus Brake Issues

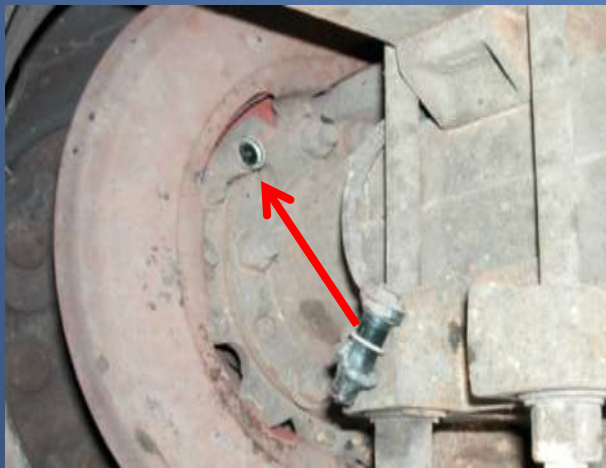


- Wet /leaking master cylinder
- Leak in hydraulic brake line from master cylinder to ABS
- Brake warning light inoperative
- Brake pad issues

Following Bus Brake Issues



- Fabricated spring assembly
- No ABS for right rear wheel



Emergency Evacuation



Lead Bus Emergency Exits



Emergency Evacuation Briefings

- Missouri requires emergency evacuation drills for K-6 grades
- St. James requires drills for 7-8 grades
- No pre-trip briefings prior to school sports or sponsored events
- Previous Safety Recommendation to NASDPTS (Closed – Exceeds Recommended Action)

Probable Cause

- Pickup truck
 - Due to texting, failed to notice truck stopped for work zone
- First school bus
 - Excessive focus on motorcoach on the shoulder
- Second school bus
 - Failure to maintain recommended minimum distance from the first bus
- Contributing
 - Lack of collision warning systems

Ongoing Investigations

- Chesterfield, NJ, February 16, 2012
- Port St. Lucie, FL, March 27, 2012

Chesterfield, NJ

- Bus struck on left side by roll-off truck while crossing intersection, spun around and impacted pole
- 1 passenger was fatally injured
- 17 passengers with serious to minor injuries
- School bus driver sustained minor injuries

Impact with pole



School Bus Interior



Port St. Lucie, FL

- Bus struck by truck on right side while turning left across divided highway
- 1 passenger was fatally injured
- 19 passengers and school bus driver received serious to minor injuries
- Truck operator refused treatment





Thank You!



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